

San Francisco Bay Delta Estuary

www.epa.gov/sfbaydelta



Sacramento, CA - Sierra Nevada



Merced River, Yosemite National Park

Agenda

- Watershed description
- Significance
- Challenges
- CWA Programs
- Budget priorities
- Summary

Watershed Description



Watershed Description

www.epa.gov/sfbaydelta



Watershed Description

Highly altered system

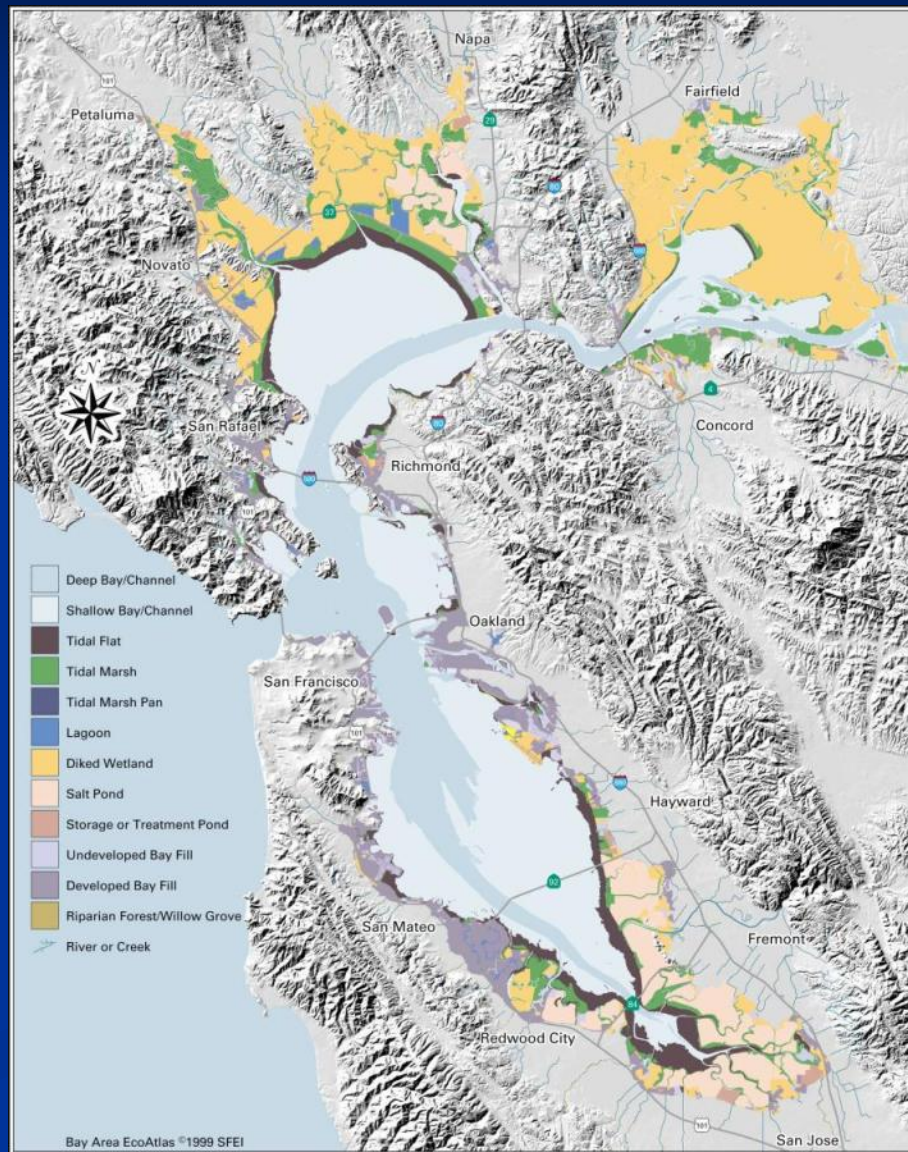
- European Settlement
- Urban Development
- Water Development

Watershed Description

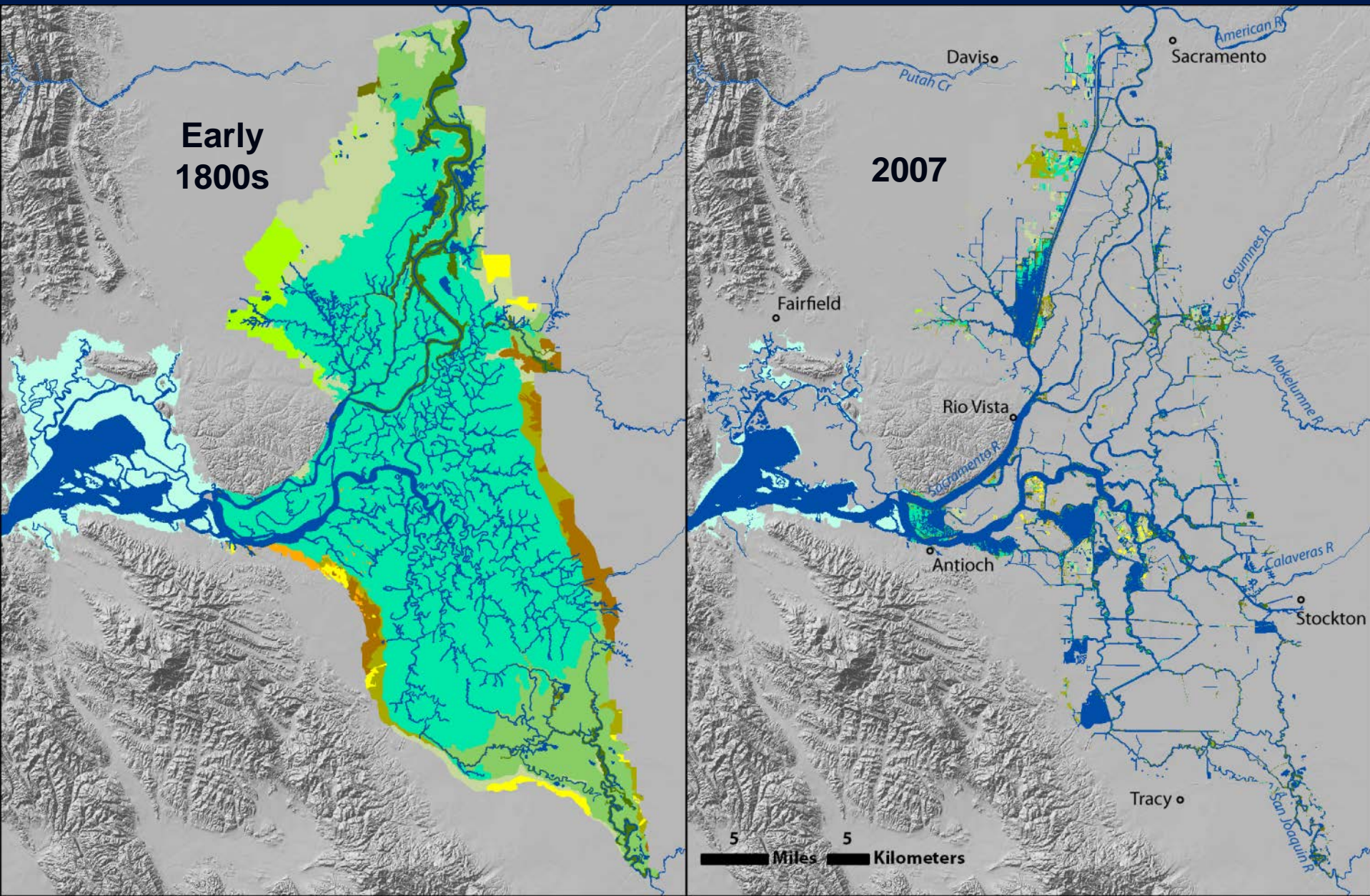
1800



2000



Watershed Description



Watershed Description

The Bay-Delta Watershed and Major Water Projects



Watershed Description



Why is this watershed important?

- Drinking Water
- Food
- Habitat
- Economy

Challenges

- Not enough water
- Persistent contamination
- Record low fish populations
- Habitat degradation & loss
- Levee vulnerability
- Climate change & sea level rise

Competing Water Needs



Contamination



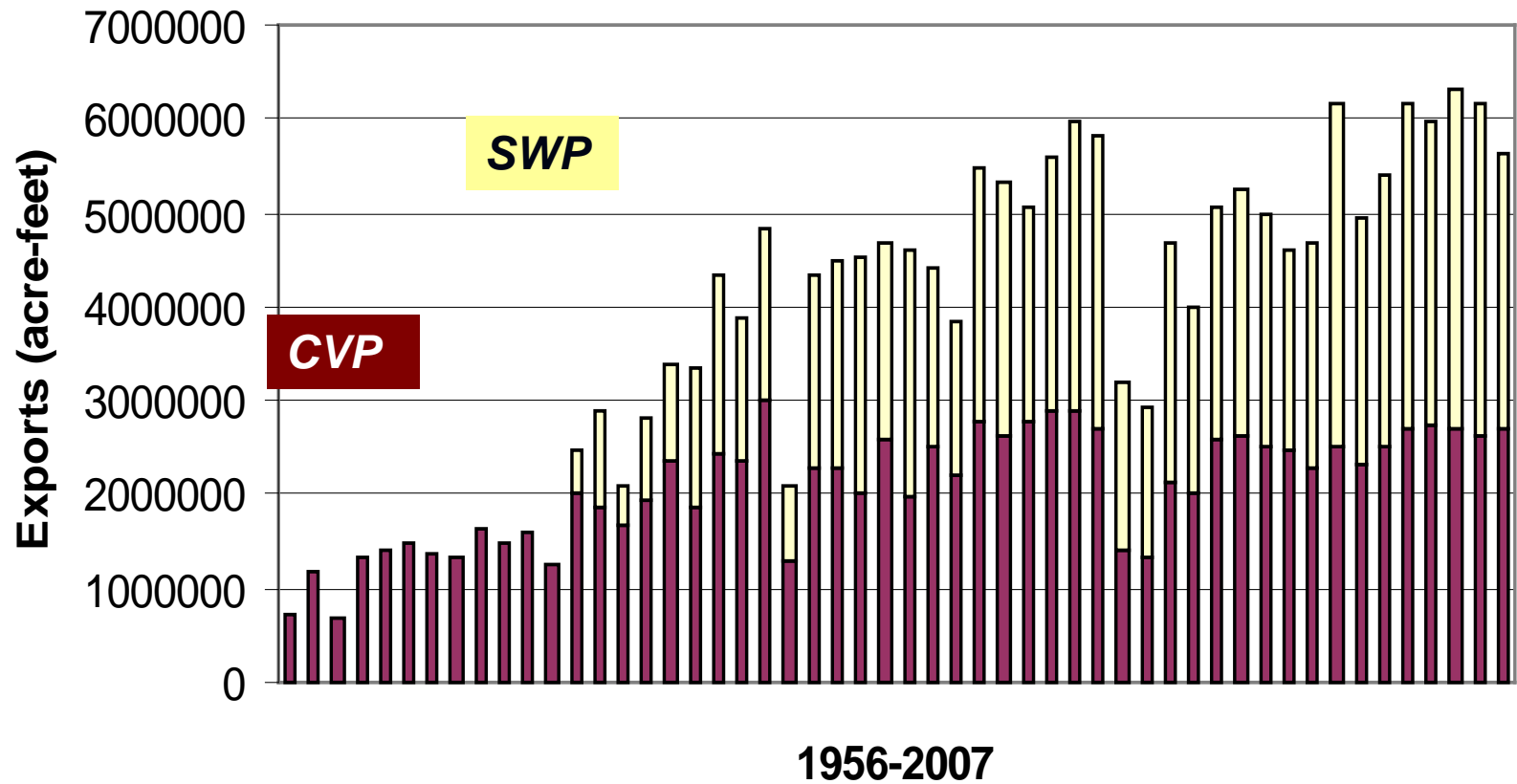
Habitat Degradation & Loss



Habitat Degradation & Loss

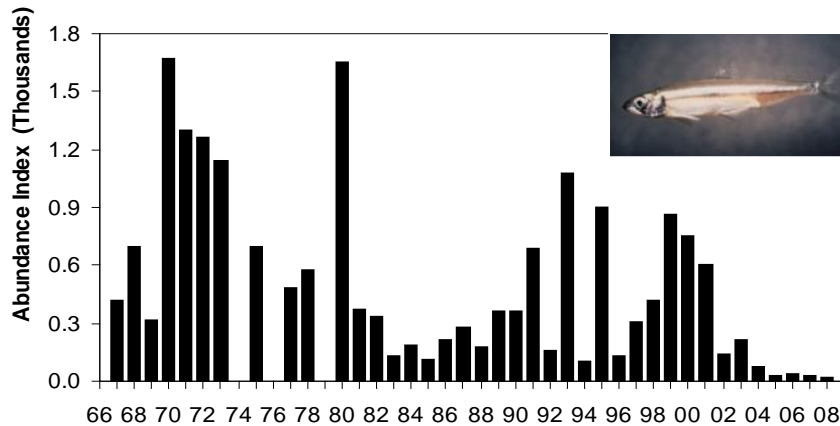


Habitat Degradation & Loss

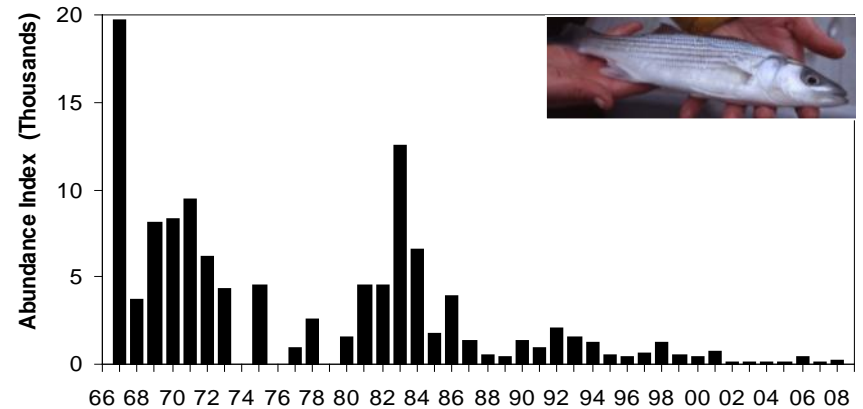


Habitat Degradation & Loss

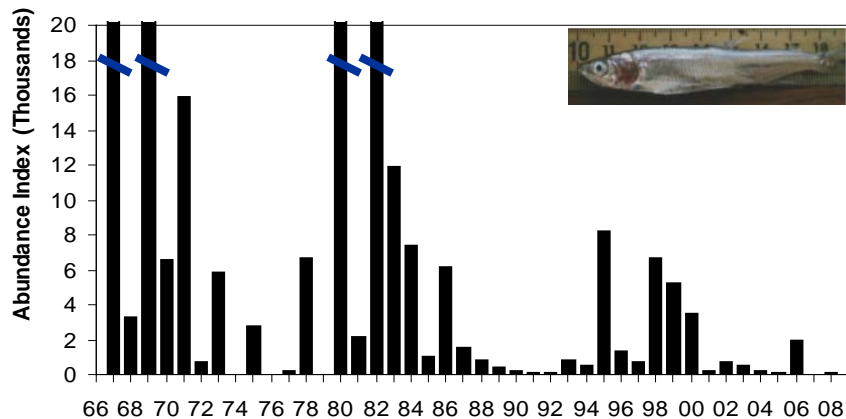
Delta Smelt



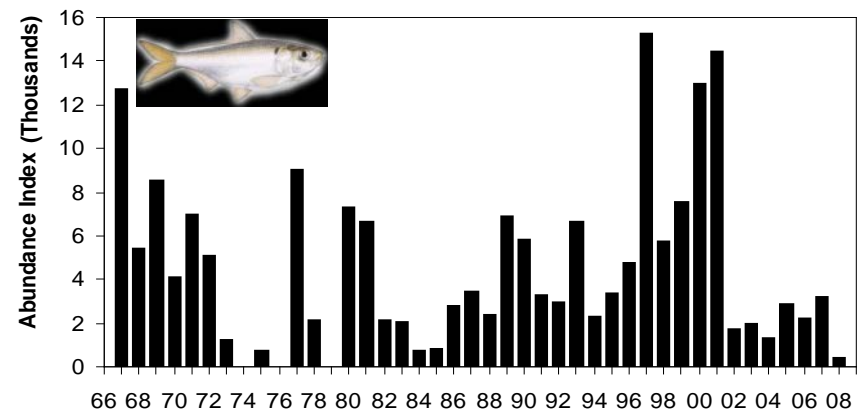
Striped Bass



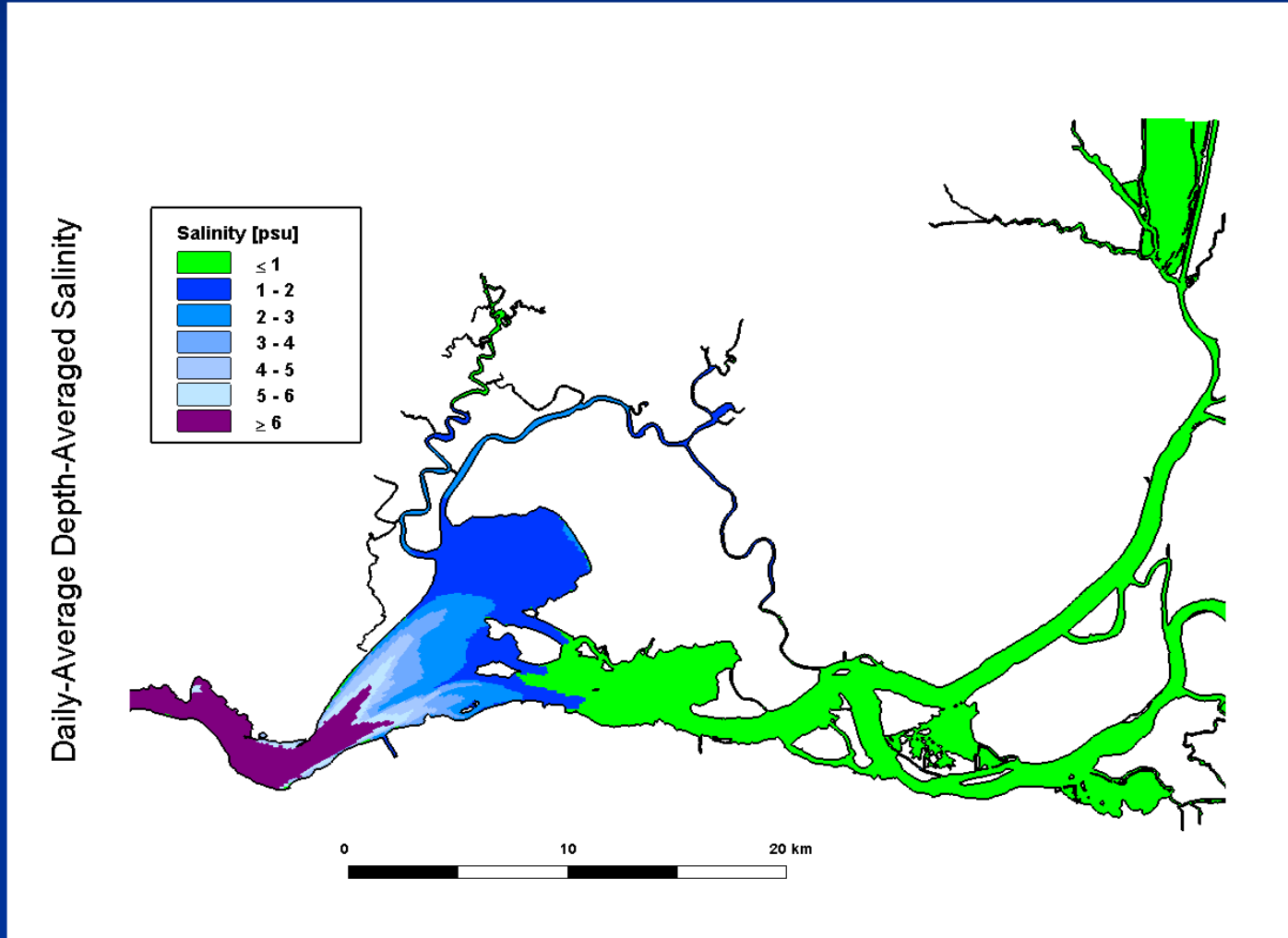
Longfin Smelt



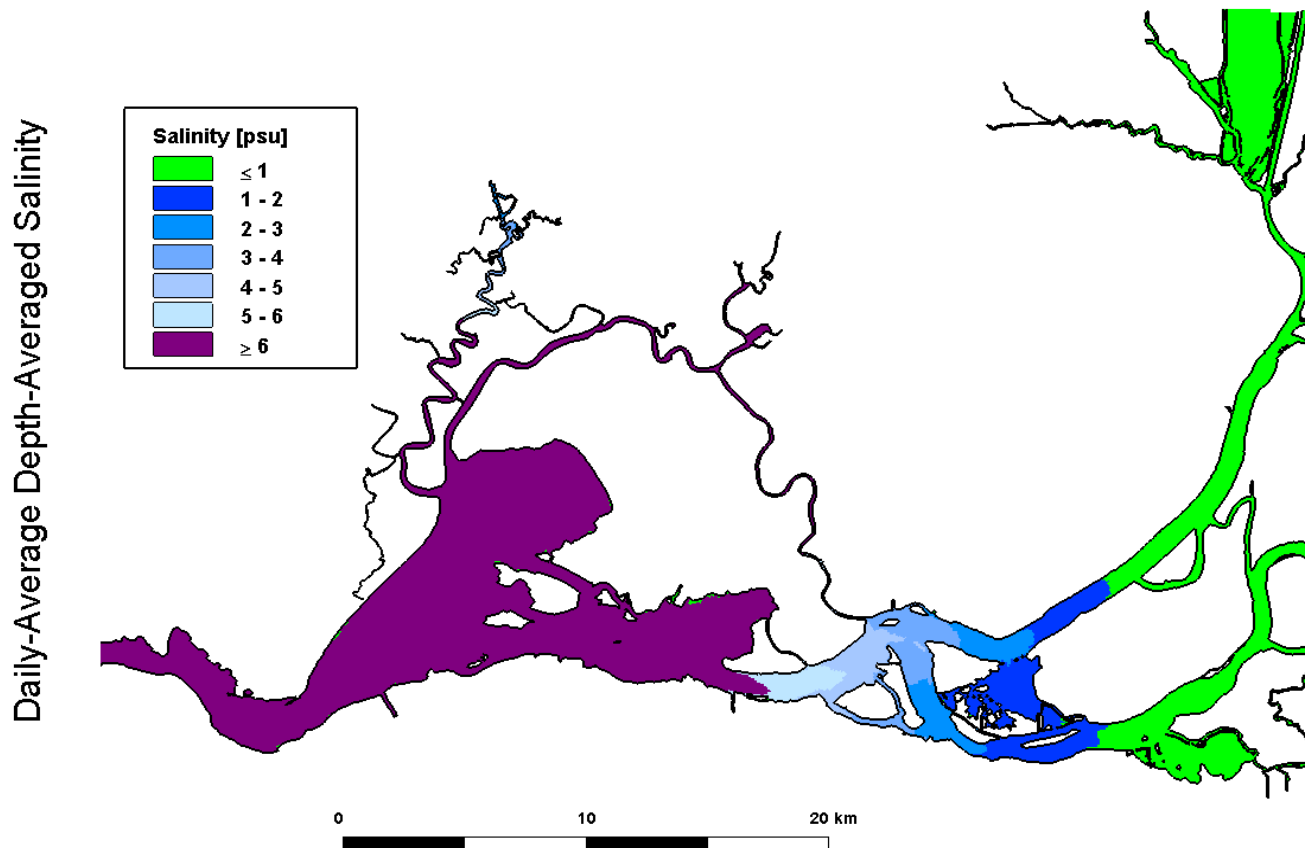
Threadfin Shad



Estuarine habitat spread across Suisun Bay = ☺ Fish



Estuarine habitat squeezed in Delta channels = ☹ Fish



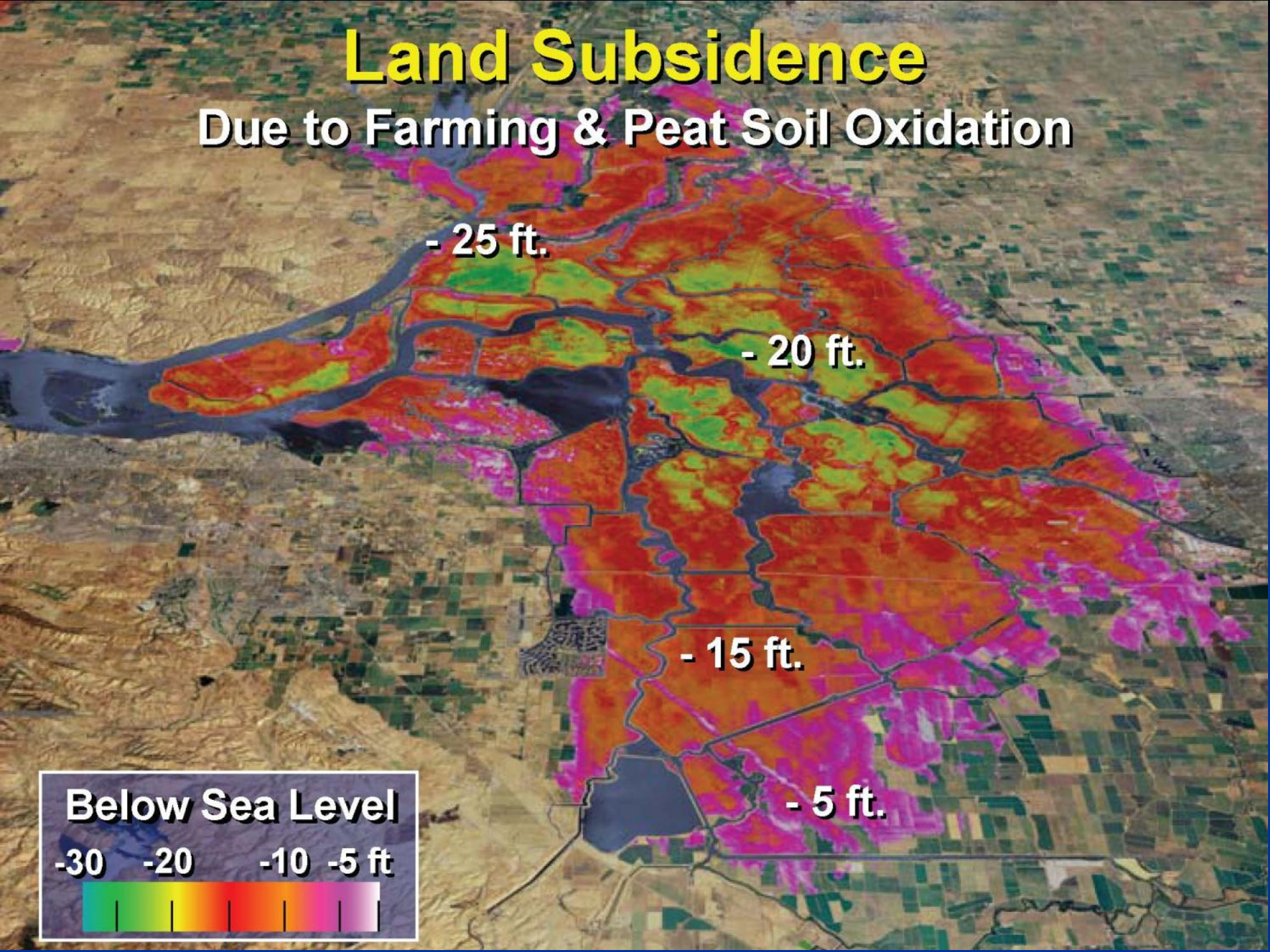
Levee Vulnerability



- 1100 miles of levees in the Delta
- Protect the “islands” and water supply
- Very few were built or are maintained to Corps of Engineers standards

Land Subsidence

Due to Farming & Peat Soil Oxidation



Seismic Vulnerability



Bay Delta Region Major Faults

Climate Change

- Loss of snowpack
- Earlier precipitation & runoff
- More dry years
- Higher air and water temperatures
- Sea level rise

Protecting & Restoring SF Bay Delta Watershed

- EPA role in the watershed
- Activities in SF Bay
- Activities in Delta

Protecting & Restoring SF Bay Delta Watershed

- National Estuary Program
- Water Quality Standards
- Water Quality Monitoring and Assessment
- Total Maximum Daily Loads (TMDLs)
- National Pollutant Discharge Elimination System (NPDES)
- Dredging & Sediment Management
- Nonpoint Source Pollution
- Wetlands

SF Bay Delta Estuary Program FY2013 Budget Priorities

- Research
- Balance competing water needs
- SF Bay competitive grant program
- SF Estuary Partnership CCMP
- Support California Water Boards
- Regulatory programs
- Monitoring

Summary

- Large watershed
- Large economy based on aquatic resources
- Complex challenges
- Important role for EPA, CWA, & NEP
- Small budget